

CITY OF THOUSAND OAKS

2020 Water Enterprise Financial Plan Update

Final Report / October 8, 2019





October 8, 2019

Mr. Clifford G. Finley
Deputy Director of Public Works
City of Thousand Oaks
2100 Thousand Oaks Blvd
Thousand Oaks, CA 91362

Subject: 2020 Water Enterprise Financial Plan Update

Dear Mr. Finley,

Raftelis is pleased to provide this report on the 2020 Water Enterprise Financial Plan Update Study (Study) to the City of Thousand Oaks (City). We are confident that the update to the financial plan and revenue adjustments will result in fair and equitable rates for the City's water customers and comply with the requirements of Proposition 218.

The Study involved a comprehensive review of the City's financial plan, capital needs, and reserve funds in order to determine proposed water rate increases for 2020 and 2021. Additionally, this report contains an appendix that provides detailed information on Raftelis' revision to the City's water pass-through adjustment rate for 2019.

It was a pleasure working with you and we wish to express our thanks to you, Mr. Jay Spurgin, Ms. Sheri Johnson, Ms. Jaime Boscarino, and other participating staff members of the City for the support and cooperation extended over the course of the Study. Should you have any questions, please do not hesitate to call me at (213) 262-9304.

Sincerely,

RAFTELIS

A handwritten signature in black ink, appearing to read 'Sanjay Gaur'.

Sanjay Gaur
Vice President

A handwritten signature in red ink, appearing to read 'Charles Diamond'.

Charles Diamond
Consultant

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Glossary

Terms	Descriptions
AF	Acre foot / Acre feet, 1 AF = 435.6 HCF
AWWA	American Water Works Association
CIP	Capital Improvement Plan
Calleguas	Calleguas Municipal Water District
COS	Cost of Service
CY	Calendar Year
EMU	Equivalent Meter Unit
FY	Fiscal Year (July 1 – June 30)
HCF	Hundred cubic feet or 100 cubic feet, 1 HCF = 748 gallons
MI Manual	"Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" published by AWWA
MFR	Multi-Family Residential
O&M	Operations and Maintenance
PAYGO	Pay-As-You-Go
SFR	Single Family Residential

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1. Executive Summary

1.1. Study Background

In 2012, the City of Thousand Oaks (City) engaged Raftelis to conduct a Financial Plan Study to develop a sustainable reserve policy and financial plan for the City's Water Enterprise and to establish rates that generate sufficient revenue to meet operational and capital needs. Raftelis completed the initial Water Enterprise Financial Plan in 2013. Raftelis updated the City's Water Enterprise Financial Plan in 2015 and 2017 in order to establish updated water rates every two years. In 2015, Raftelis also performed a comprehensive cost of service study (adopted in 2016) to develop equitable water rates which comply with the requirements of Proposition 218. Raftelis was again engaged by the City in late 2018 to provide a Water Enterprise Financial Plan update and to establish proposed water rates for 2020 and 2021.

Although increases in the cost of imported water supplies from Calleguas Municipal Water District (Calleguas) in 2019 were lesser than anticipated, imported water supply costs continue to represent a significant pressure on the Water Enterprise's net revenues. Additionally, there is substantial capital improvement plan (CIP) expenditures projected over the next five years, including over \$16 million in capital costs associated with the Thousand Oaks Groundwater Utilization Project. The City has instructed Raftelis to propose any necessary rate increases to ensure financial sufficiency over the five-year Study period (FY 2020 to FY 2024).

In addition, Raftelis' financial plan model developed for the City's Water Enterprise includes the ability to pass through increased costs of imported water supply to the City's customers, in accordance with AB 3030 and other regulations. Raftelis recommends that the City continue to make use of the pass-through provision for the Study period as a means of mitigating the financial risk associated with the uncertainty in water supply costs. This report presents the Water Enterprise Financial Plan over a five year period – however rates are reviewed and adopted in two year cycles by the City. Therefore, only rates for FY 2020 and FY 2021 are presented in this report.

1.2. Objectives of the Study

The major objectives of the Study include the following:

- » Update the financial plan and propose revenue adjustments for the Water Enterprise to ensure financial sufficiency by meeting operation and maintenance (O&M) costs, ensure sufficient funding of City financial reserves, and fund capital improvements.
- » Review reserve fund targets.
- » Develop fair and equitable rates based on the necessary revenue adjustment percentage.

1.3. Results and Recommendations

Reserve Policy

A reserve policy provides a basis for the City's Water Enterprise to cope with fiscal emergencies such as revenue shortfalls, asset failure, natural disaster, etc. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies.

The City maintains three types of reserves for its Water Enterprise: 1) O&M Cash Flow Reserve - to provide working capital to support the operation, maintenance, and administration of the utility; 2) Emergency Reserve - to allow the utility to provide uninterrupted service in light of a fiscal or physical emergency; and 3) Capital

Improvement Plan Reserve - used to fund future obligations that are necessary for maintaining reliable infrastructure. Raftelis recommends that the City maintain its existing reserve policies for the Water Enterprise's O&M Cash Flow and Emergency reserves. However, Raftelis does recommend that the City modify its Capital Improvement Plan reserve policy so that the reserve target is based on 5-year planned CIP expenditures rather than the replacement cost of water system assets. This proposed change will provide a CIP reserve target that is more directly tied to capital spending and therefore better aligned with future capital funding needs.

Table 1-1 lists the recommended reserve policies for the Water Enterprise. Note that the Water CIP Fund previously had a target of 5% of the water system asset value (by replacement cost). This new proposed target is equal to two years' worth of annual average five-year CIP.

Table 1-1: Recommended Water Reserves

Reserve	Recommended Policy	FY 2020 Target Level
Fund 611 – Water Operating Fund		
O&M Cash Flow	25% of Operating Budget	\$6.2M
Fund 613 – Water Capital Fund		
Emergency	Replacement cost of Wilder Reservoir (most critical asset)	\$4.3M
CIP	Two years of annual average 5-year CIP	\$17.4M
Total Water Fund		\$27.9M

Proposed Revenue Adjustments

Table 1-2 shows the proposed revenue adjustments for the Water Enterprise for the next five fiscal years, from FY 2020 through FY 2024. The revenue adjustments for water include revenue needed to fund approximately \$25 million of annual operating costs and an estimated \$44 million of CIP over the five-year Study period. It is important to note that the revenue adjustments shown below do not include any pass-through costs resulting from increased water supply costs from Calleguas.

Table 1-2: Proposed 5-Year Revenue Adjustments

Fiscal Year	Effective Date	Revenue Adjustment
FY 2020	February 13, 2020	1%
FY 2021	January 1, 2021	1%
FY 2022	January 1, 2022	1%
FY 2023	January 1, 2023	1%
FY 2024	January 1, 2024	1%

Factors Affecting Revenue Adjustments

The following items significantly affect the Water Enterprise's revenue requirement (i.e. costs) and thus its water rates:

- » **Planned Capital Expenditures:** The financial plan accounts for approximately \$44 million of CIP expenditures over the five-year Study period, which consists of projects to repair and replace the City's aging water system infrastructure as well as new projects such as the Thousand Oaks Groundwater Utilization Project.
- » **Reserve Funding:** The Water Enterprise has operating, emergency, and capital reserves – collectively amounting to an average of \$28.2M in funds over the Study period that will be reserved.

Proposed Financial Plan

Figure 1-1 illustrates the operating position of the Water Enterprise, where the expenses and reserve funding are shown by stacked bars and total revenues at current rates and proposed rates are shown by red and green lines, respectively. Under the proposed rate adjustments shown in **Table 1-2**, the Water Enterprise will be able to contribute more to reserves, which are required to fund capital needs and to maintain healthy reserve levels in case of emergency.

Figure 1-1: Operating Financial Plan

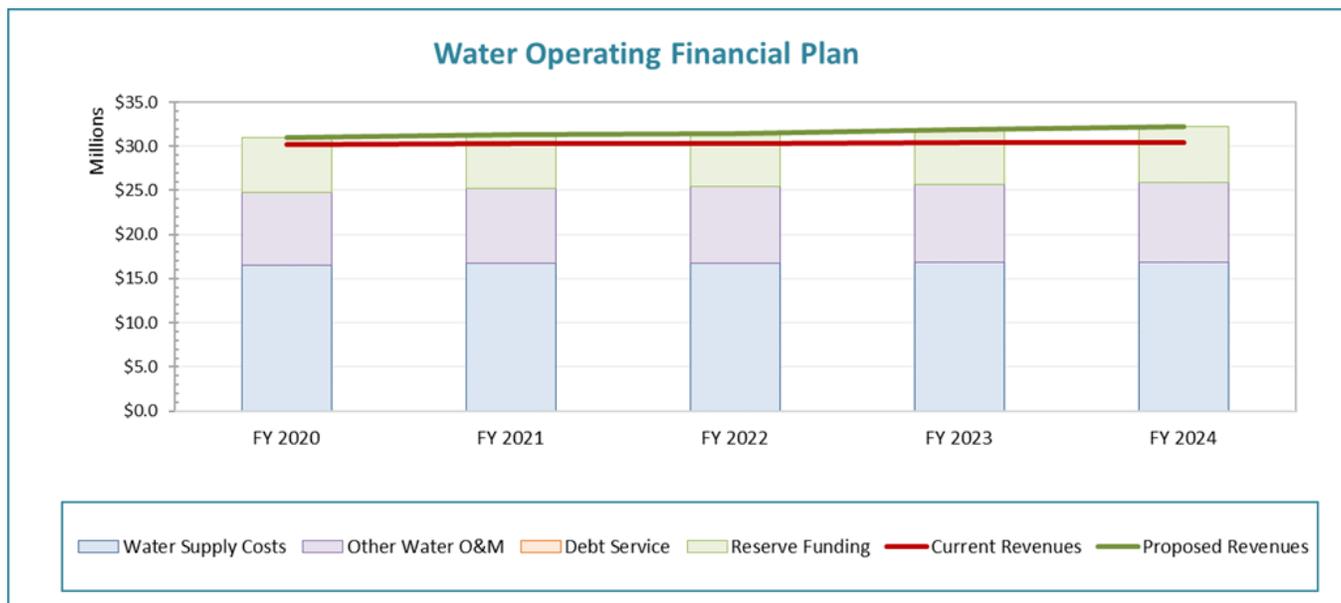
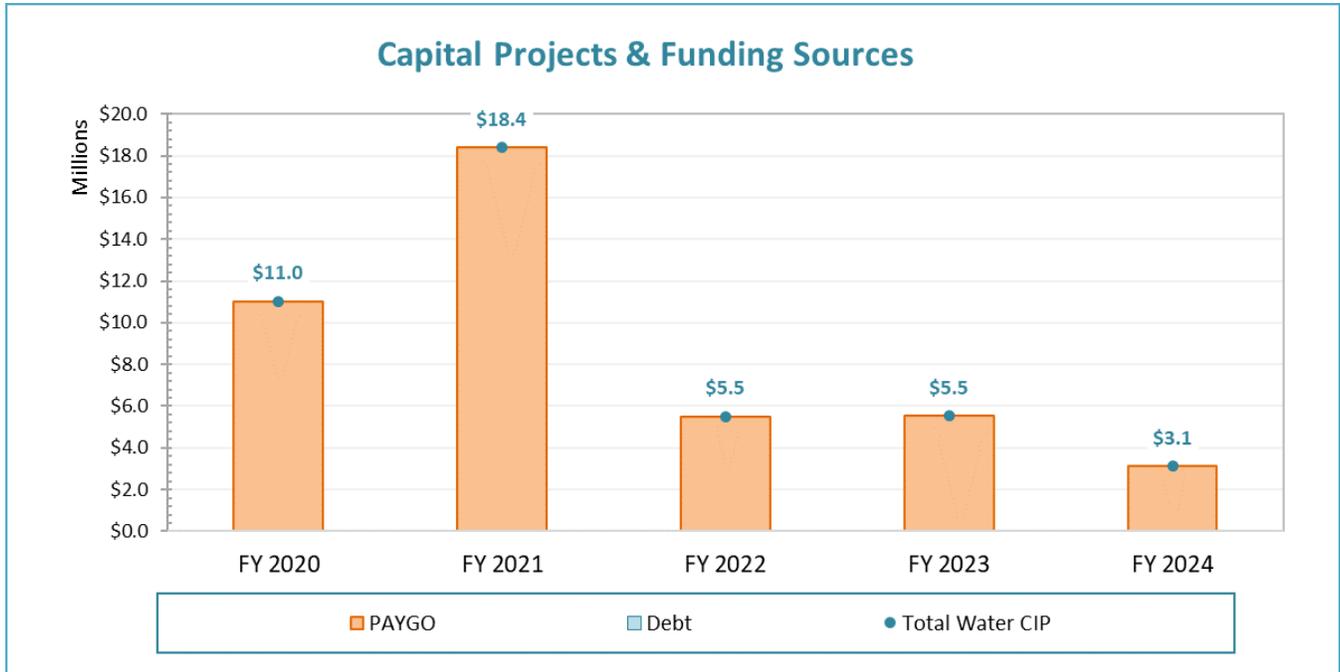


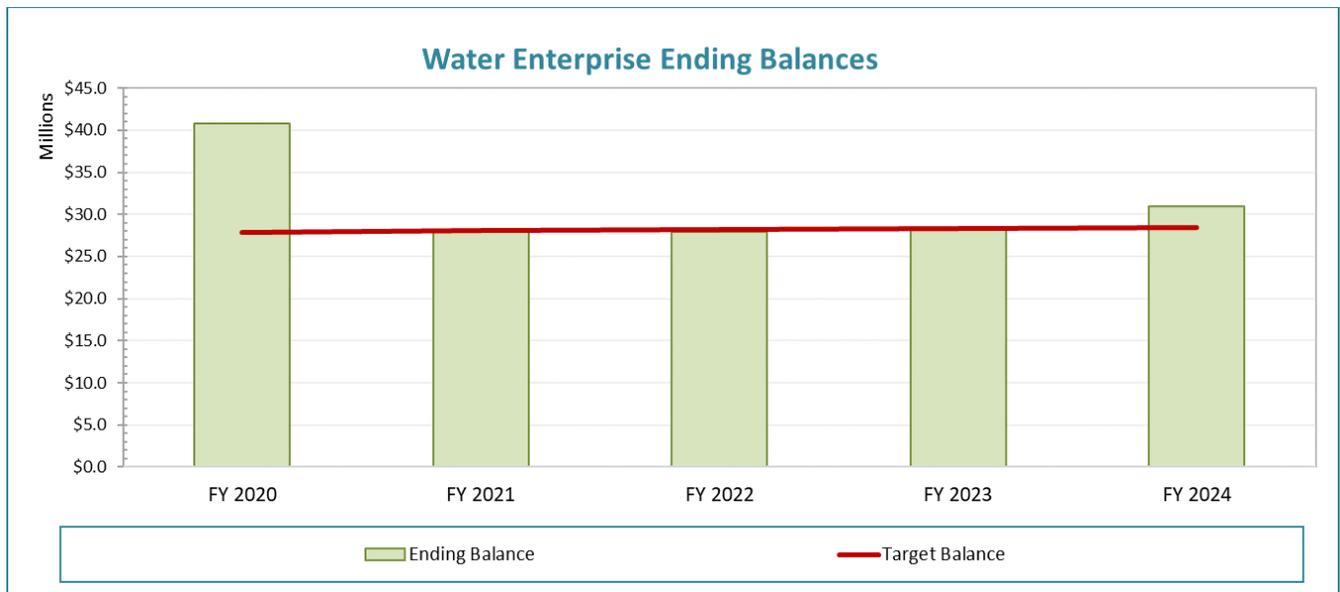
Figure 1-2 summarizes the projected CIP expenses, which have an average annual CIP expenditure of \$8.7M over the 5-year planning horizon of FY 2020 - FY 2024. The proposed capital improvement plan will be funded entirely through rate revenues and reserves (Pay As You Go or PAYGO).

Figure 1-2: Capital Improvement Plan Funding



The ending fund balance for the Water Enterprise includes the beginning balances plus net cash changes for the year. The ending fund balance for the Water Enterprise is projected and shown in **Figure 1-3**, where the red line indicates the target reserve balance. Under the proposed financial plan, the ending fund balance drops marginally below the target level in FY 2021 to FY 2023 before recovering to above the target level in FY 2024. The reduction in reserve levels over the Study period is largely due to substantial PAYGO-funded CIP expenditures in FY 2020 and FY 2021.

Figure 1-3: Projected Ending Fund Balance



Proposed Water Rates

The City wishes to maintain the rate structure defined as part of the 2016 water cost of service study conducted by Raftelis, and to adjust current 2019 rates to meet the City’s revenue needs. Raftelis proposes a 1% annual revenue adjustment for each of the five years in the Study period. Note that while the study period encompasses FY 2020-2024, the City adopts only two years of rates at a time; therefore, the following tables only show proposed rates for FY 2020 and FY 2021.

Table 1-3: Proposed Monthly Fixed Charges for FY 2020 and FY 2021

Monthly Fixed Charges	Current FY 2019	Proposed FY 2020 (Effective 2/13/2020)	Proposed FY 2021 (Effective 1/1/2021)
Meter Size			
5/8"	\$25.57	\$25.83	\$26.09
1"	\$40.36	\$40.77	\$41.18
1 1/2"	\$77.32	\$78.10	\$78.89
2"	\$121.69	\$122.91	\$124.14
3"	\$262.16	\$264.79	\$267.44
4"	\$469.17	\$473.87	\$478.61
6"	\$964.52	\$974.17	\$983.92

Table 1-4: Proposed Commodity Rates for FY 2020 and FY 2021¹

Single Family Residential Commodity Rates	FY 2020 Rate Adjustment		FY 2021 Rate Adjustment	
	(\$)	(%)	(\$)	(%)
Tier 1 (0-12 hcf)				
Existing Rate	\$4.87		\$4.92	
City Adjustment	\$0.05	1.0%	\$0.05	1.0%
	\$4.92		\$4.97	
Pass-through Adjustment	\$0.11	2.3%	\$0.27	3.3%
Total Tier 1 Rate	\$5.03	3.3%	\$5.24	4.3%
Tier 2 (13-30 hcf)				
Existing Rate	\$5.19		\$5.25	
City Adjustment	\$0.05	1.0%	\$0.05	1.0%
	\$5.25		\$5.31	
Pass-through Adjustment	\$0.11	2.1%	\$0.27	3.0%
Total Tier 2 Rate	\$5.36	3.1%	\$5.58	4.0%
Tier 3 (31+ hcf)				
Existing Rate	\$5.61		\$5.67	
City Adjustment	\$0.06	1.0%	\$0.06	1.0%
	\$5.67		\$5.73	
Pass-through Adjustment	\$0.11	2.0%	\$0.27	2.8%
Total Tier 3 Rate	\$5.78	3.0%	\$6.00	3.8%
Non-Residential & MFR Commodity Rates	FY 2020 Rate Adjustment		FY 2021 Rate Adjustment	
	(\$)	(%)	(\$)	(%)
Existing Rate	\$5.21		\$5.27	
City Adjustment	\$0.05	1.0%	\$0.05	1.0%
	\$5.27		\$5.33	
Pass-through Adjustment	\$0.11	2.1%	\$0.27	3.0%
Total Non-Residential & MFR Rate	\$5.38	3.1%	\$5.60	4.0%
Pumping Charge	FY 2020 Rate Adjustment		FY 2021 Rate Adjustment	
	(\$)	(%)	(\$)	(%)
Uniform	\$0.21	1%	\$0.22	1%

¹ Some totals shown in **Table 1-4** may not add precisely due to rounding of final rates.

2. Introduction

2.1. Study Background

In 2012, the City of Thousand Oaks (City) engaged Raftelis to conduct a Financial Plan Study to develop a sustainable reserve policy and financial plan for the City's Water Enterprise and to establish rates that generate sufficient revenue to meet operational and capital needs. Raftelis completed the initial Financial Plan in 2013. Raftelis updated the City's Water Enterprise Financial Plan in 2015 and 2017 in order to establish updated water rates every two years. In 2015, Raftelis also performed a comprehensive cost of service study (adopted in 2016) to develop equitable water rates which comply with the requirements of Proposition 218. Raftelis was again engaged by the City in late 2018 to provide a 2019 Water Enterprise Financial Plan update and to establish proposed water rates for fiscal years (FY) 2020 and FY 2021.

As part of the scope of this Study, Raftelis additionally developed a revised 2019 pass-through adjustment rate for the City in October 2018 as a result of 2019 Calleguas Municipal Water District (Calleguas) supply costs increasing less than what was projected. This resulted in the City implementing lower commodity rates in 2019 than what was originally adopted, and effectively passing on water supply cost savings to the City's water customers. Detailed information on the revision to the 2019 pass-through adjustment rate is provided in **Appendix B**.

Although increases in the cost of imported water supplies from Calleguas Municipal Water District (Calleguas) in 2019 were less than anticipated, imported water supply costs continue to represent a significant pressure on the Water Enterprise's net revenues. Additionally, there is substantial capital improvement plan (CIP) expenditures projected over the next five years, including over \$16 million in capital costs associated with the Thousand Oaks Groundwater Utilization Project. The City has instructed Raftelis to propose any necessary rate increases to ensure financial sufficiency over the five-year Study period (FY 2020 to FY 2024).

In addition, Raftelis' financial plan model developed for the City's Water Enterprise includes the ability to pass through increased costs of imported water supply to the City's customers, in accordance with AB 3030 and other regulations. Raftelis recommends that the City continue to make use of the pass-through provision for the Study period as a means of mitigating the financial risk associated with the uncertainty in water supply costs. This report presents the financial plan over a five-year period – however rates are reviewed and adopted in two year cycles by the City. Therefore, only rates for FY 2020 and FY 2021 are presented in this report.

2.2. Objectives of the Study

The major objectives of the Study include the following:

- » Update the financial plan and propose revenue adjustments for the Water Enterprise to ensure financial sufficiency by meeting operation and maintenance (O&M) costs, ensure sufficient funding of City financial reserves, and fund capital improvements.
- » Review reserve fund targets.
- » Develop fair and equitable rates based on the necessary revenue adjustment percentage.

2.3. Legal Requirements and Rate-Setting Methodology

California Constitution - Article XIII D, Section 6 (Proposition 218)

Proposition 218, reflected in the California Constitution as Article XIII D, was enacted in 1996 to ensure that rates and fees are reasonable and proportional to the cost of providing service. The principal requirements, as they relate to public water service are as follows:

1. A property-related charge (such as water rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property related service.
2. Revenues derived by the charge shall not be used for any purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

As stated in AWWA's M1 Manual, "water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers." Proposition 218 requires that water rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and that there must be a nexus between the costs and the rates charged. In 2015, Raftelis performed a Cost of Service study (adopted in 2016) for the Water Enterprise, in which Raftelis followed industry standard rate setting methodologies set forth by the AWWA M1 Manual to ensure that the City's rates do not exceed the proportionate cost of providing water services. This 2020 Water Enterprise Financial Plan Update Study continues with the same rate structure as adopted in 2016, and results in uniform percentage increases to all rates based on the City's updated revenue requirements.

Tiered Rates

The City currently has an "Inclining" tier rate structure (which is synonymous with "increasing" tier rate structures and "tiered" rates) in place for Single Family Residential (SFR) customers. When properly designed and differentiated by customer class, tiered rates allow a water utility to send conservation price signals to customers. Due to heightened interest in water conservation and efficiency of water use, inclining tier water rates have gained widespread use, especially in relatively water-scarce regions like Southern California. Tiered rates meet the requirements of Proposition 218 as long as the tiered rates reasonably reflect the proportionate cost of providing service in each tier.

3. General Assumptions

3.1. Inflation

The Study period is for FY 2020 to FY 2024. Various types of assumptions and inputs were incorporated into the Study based on recommendations from Raftelis and direction from City staff. These include the projected number of accounts and annual growth rates in consumption for different customer classes, inflation factors, and other assumptions. Inflationary assumptions are shown below in **Table 3-1**.

Table 3-1: Inflation Factor Assumptions

Inflation Factors	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
General	2.00%	2.00%	2.00%	2.00%	2.00%
Salary	2.75%	2.75%	2.75%	2.75%	2.75%
Benefits	4.00%	4.00%	4.00%	4.00%	4.00%
Electricity	3.00%	3.00%	3.00%	3.00%	3.00%
Fuel	2.00%	2.00%	2.00%	2.00%	2.00%
Capital	1.50%	1.50%	1.50%	1.50%	1.50%

In addition, Calleguas has projected new rate increases on the following rates relevant to the City: the Capacity Reservation Charge (CRC), the Readiness-to-Serve (RTS) charge, and the Tier 1 usage rate. These projections are shown below in **Table 3-2** for FY 2021 through FY 2024. Note that the projected increases are applied to adopted Calleguas rates for 2020.

Table 3-2: Projected Calleguas Rate Increases

Inflation Factors	FY 2021	FY 2022	FY 2023	FY 2024
Calleguas CRC	4.10%	3.70%	3.90%	3.90%
Calleguas RTS	4.10%	3.70%	3.90%	3.90%
Calleguas Commodity	4.10%	3.70%	3.90%	3.90%

3.2. Projected Demand and Growth

Projecting water demand relies on two key variables — the number of accounts and demand per account. Because the City is built-out, it is anticipated that there will be minimal account growth over the Study period. The growth rate is based on staff estimates using historic trends. The projected account growth shown in **Table 3-3** applies to all meter sizes.

Table 3-3: Account Growth Rate for All Customer Classes

GROWTH RATE				
FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
0.10%	0.10%	0.10%	0.10%	0.10%

Sales are expected to grow by 0.1% annually for the next five fiscal years, which is due solely to account growth. The City’s Water Enterprise has already experienced a rebound in water demand since the end of the recent drought. Raftelis recommends that no additional increase in demand per account be projected over the Study period relative to FY 2018 in order to incorporate conservative water sales assumptions that are less likely to overestimate projected rate revenues. The estimated water sales for each year of the Study period are shown below in **Table 3-4**. Raftelis projected sales in FY 2019 to FY 2024 based on FY 2018 actual sales, which represented the most recent fiscal year in which complete water sales data was available during Raftelis’ development of the financial plan presented in this report.

Table 3-4: Projected Annual Water Sales

Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
% Increase		0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
AF Demand	10,027 AF	10,037 AF	10,047 AF	10,057 AF	10,067 AF	10,077 AF	10,087 AF

3.3. Reserve Policy

A reserve policy is a written document that provides a basis for the City to cope with unanticipated reductions in revenues, offset fluctuations in costs of providing services, and fiscal emergencies such as revenue shortfalls, asset failure, and natural disaster. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies. It also sets funds aside for repair and replacement of capital assets as they age and for new capital projects. Additionally, adopting and adhering to a sustainable reserve policy enhances financial management transparency and helps achieve or maintain a specific credit rating for future debt issues.

An appropriate reserve policy is determined by a variety of factors, such as the size of the operating budget, the amount of debt, the type of rate structure, frequency of customer billing, and risk of natural disaster. Thus, most reserves tend to fall into the following categories: operations & maintenance (O&M) cash flow, rate stabilization, CIP, and emergency. The City currently maintains three reserves for the Water Enterprise. Raftelis recommends that the City maintain the existing reserve policies for its O&M Cash Flow (Fund 611) and Capital Emergency (Fund 613) reserves, while modifying the reserve policy for its Capital Improvement Plan (Fund 613) reserve. The recommended reserve policies for each reserve are described below.

O&M Cash Flow (Fund 611)

The purpose of an O&M cash flow reserve is to provide working capital to support the operation, maintenance, and administration of the utility. From a risk management perspective, the O&M reserve supports the Water Enterprise’s cash flow needs during normal operations and ensures that operations can continue should there be significant events that impact cash flows.

Raftelis recommends that the City maintain 90 days cash (25% of annual operating budget) for the Water Operating Fund to ensure adequate working capital for operating expenses. With the exception of select commercial accounts, the City bills bi-monthly. The time gap between accounts receivables and actual cash expenses ranges from 60 to 120 days, warranting higher operational reserves than an agency that bills monthly. This reserve policy results in FY 2020 target reserve level of \$6.2M for 90 days of cash reserves for the Water Operating Fund.

Capital Emergency (Fund 613)

The purpose of an emergency reserve is to allow the utility to provide uninterrupted service in a fiscal emergency, natural disaster, or facility failure. An emergency reserve decreases risk by recognizing the high capital costs of facilities and setting aside adequate funds to restore service after an unanticipated event or to repair or replace an essential facility.

Per a critical-asset analysis provided by GHD in its 2013 Asset Management Plan Study, the Wilder Reservoir is the most critical asset in the system. Typical asset failure scenarios were evaluated and it was determined that \$4.3M would be needed to replace the Wilder Reservoir. Raftelis recommends that \$4.3M be set aside for emergency use. Although this level of emergency reserve is sufficient for now, the reserve should be re-evaluated periodically as the system ages. A summary of the City’s most critical water assets is shown below in **Table 3-5**.

Table 3-5: Replacement Cost of Critical Water Assets²

Location	Install Year	Size (MGD)	Replacement Cost (FY 2020)	Criticality Score
Wilder Reservoir	1964	1	\$4,287,384	7
Rolling Oaks Reservoir	2002	0.35	\$1,287,781	6
Grissom Reservoir #1	1987	0.2	\$1,030,225	4.5
Grissom Reservoir #2	1981	0.22	\$1,030,225	4.5
Willow Lane Reservoir	1983	5	\$15,453,375	4.2
Recommended Target			\$4,287,384	

Capital Improvement Plan (Fund 613)

CIP reserves are used to fund future obligations that are necessary for maintaining reliable infrastructure. Because water utilities are highly capital-intensive enterprises, it is important to accurately estimate long-term CIP costs and develop a reserve to fund the eventual replacement of the system and new capital projects.

The existing CIP reserve target is set equal to 5% of the replacement cost of water-related assets. However, Raftelis recommends that the City modify its CIP reserve policy so that the target is based on planned CIP expenditures rather a portion of the replacement cost of water-related assets. This proposed change will allow for a CIP reserve target that is more directly correlated with capital spending and therefore better aligned with future capital funding requirements.

Raftelis recommends an updated CIP reserve target in which the reserve target level is set equal to two years of annual average five-year CIP. The proposed reserve target will ensure that the City has cash reserves on hand to flexibly and efficiently award construction contracts, and to reduce the potential need for debt financing of capital projects. Annual average CIP over the five-year Study period is approximately \$8.7M. Twice this amount is approximately \$17.4M, which represents the FY 2020 CIP reserve target level of two years’ worth of annual average five-year CIP.

Proposed Water Reserves

Table 3-6 summarizes the recommended reserve policy and associated FY 2020 target level for the Water Enterprise for adequate operating working capital, emergency use, and working capital for future CIP projects.

² Based on Asset Management Plan Study conducted by GHD in 2013; values shown are adjusted by Raftelis to account for capital inflation.

Table 3-6: Recommended Water Reserves

Reserve	Recommended Policy	FY 2020 Target Level
Fund 611 – Water Operating Fund		
O&M Cash Flow	25% of Operating Budget	\$6.2M
Fund 613 – Water Capital Fund		
Emergency	Replacement cost of Wilder Reservoir (most critical asset)	\$4.3M
CIP	Two years of annual average 5-year CIP	\$17.4M
Total Water Fund		\$27.9M

Applying the same methodology for determining the reserve target levels to all years of the Study period yields the following targets shown in **Table 3-7** below.

Table 3-7: Reserve Targets for Study Period

Reserves	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
O&M Cash Flow	\$6,184,403	\$6,293,598	\$6,354,396	\$6,416,862	\$6,481,050
Emergency	\$4,287,384	\$4,351,695	\$4,416,971	\$4,483,225	\$4,550,473
CIP	\$17,433,090	\$17,433,090	\$17,433,090	\$17,433,090	\$17,433,090
Total Reserve Target	\$27,904,878	\$28,078,383	\$28,204,456	\$28,333,177	\$28,464,614

4. Financial Plan

A review of a utility’s revenue requirements is a key first step in the rate design process. The review involves an analysis of annual operating revenues under the current rates, operation and maintenance (O&M) expenses, capital expenses, and reserve requirements. This section of the report provides a discussion of the projected revenues, O&M and capital expenses, capital improvement financing plan, and revenue adjustments required to ensure the fiscal sustainability of the Water Enterprise.

4.1. Revenues from Current Rates

The City’s water service charges have two components – a monthly fixed charge and a commodity usage charge. In addition, most customers are subject to a volumetric pumping charge. The current rate structure was established during a comprehensive cost of service study conducted by Raftelis in 2015 (adopted in 2016). Current rates for FY 2019 were established during the previous Water Enterprise Financial Plan update in 2017, with current commodity rates revised in late 2018 to incorporate revised pass-through adjustment rates for 2019. **Table 4-1** summarizes the current monthly fixed charges by meter size.

Table 4-1: Current Monthly Fixed Charges

Meter Size	Rate
5/8-inch	\$25.57
1-inch	\$40.36
1 1/2-inch	\$77.32
2-inch	\$121.69
3-inch	\$262.16
4-inch	\$469.17
6-inch	\$964.52

In addition to the fixed monthly charge, customers also pay a volumetric commodity charge rate per hundred cubic feet (hcf) of water delivered. Single family residential (SFR) customers are charged on an inclining three-tier rate structure. All other users are charged a uniform commodity rate per hcf. Customers subject to pumping charges pay a uniform rate of \$0.20 per hcf. The commodity charges for all customer classes is shown below in **Table 4-2**.

Table 4-2: Current Commodity Rates

Customer Class	Current Rate (FY 2019)
Single Family Residential	
Tier 1 (0-12 hcf)	\$4.87
Tier 2 (13-30 hcf)	\$5.19
Tier 3 (31+ hcf)	\$5.61
Non-Residential & Multi-Family Residential	
MFR/Commercial/Irrigation/Construction	\$5.21
Pumping	
Pumping Charge	\$0.20

Using the account growth percentages in **Table 3-3**, the number of accounts in each customer class was projected for the Study period.

Table 4-3: Projected Account Totals by Meter Size

Meter Size	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
5/8-inch	15,398	15,413	15,429	15,444	15,459
1-inch	1,030	1,031	1,032	1,033	1,034
1 1/2-inch	350	350	350	351	351
2-inch	309	309	309	310	310
3-inch	36	36	36	36	36
4-inch	23	23	23	23	23
6-inch	7	7	7	7	7
Total Accounts	17,152	17,169	17,187	17,204	17,221

Projected potable water sales from **Table 3-4** were used to project annual potable water usage in each tier and customer class over the Study period. The projected water sales by customer class and tier for each year of the Study period is shown in **Table 4-4** below. In addition, the number of hcf subject to lift charges (an additional charge to deliver water in elevated areas) is shown in the final line of **Table 4-4**.

Table 4-4: Projected Water Use by Customer Class and Tier

Customer Class	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Single Family Residential					
Tier 1 (0-12 hcf)	1,954,287	1,956,242	1,958,198	1,960,156	1,962,116
Tier 2 (13-30 hcf)	773,745	774,519	775,293	776,068	776,845
Tier 3 (31+ hcf)	233,364	233,598	233,831	234,065	234,299
Non-SFR					
MFR	314,175	314,490	314,804	315,119	315,434
Commercial	507,007	507,515	508,022	508,530	509,039
Irrigation	590,531	591,122	591,713	592,305	592,897
Construction	3,296	3,299	3,302	3,305	3,309
Total Water Usage (hcf)	4,376,407	4,380,783	4,385,164	4,389,549	4,393,939
Total Water Usage (AF)	10,047	10,057	10,067	10,077	10,087
Subject to Lift Charges (hcf)	3,697,263	3,700,961	3,704,662	3,708,366	3,712,075

Table 4-5 shows the projected revenues for the Study period under the existing rates. The commodity revenues shown for FY 2020 through FY 2024 are calculated by multiplying the projected usage by the FY 2019 rate. For example, the commodity charge revenue from Tier 1 usage for FY 2020 can be calculated as follows:

$$\begin{aligned} & \text{Projected Tier 1 Usage for FY 2020} \times \text{Current Tier 1 Rate} \\ & 1,954,287 \times \$4.87 = \$9.52M \end{aligned}$$

The same calculation is repeated for all tiers and the other customer classes to determine the total commodity revenue for each year of the Study period. For FY 2020, the projected commodity rate revenue is \$22.2M, exclusive of pumping charge revenue.

The monthly fixed charge revenue is the fixed portion of the water service charge that increases with meter size. Referring to the monthly fixed rates and account totals in **Table 4-1** and **Table 4-3** respectively, the monthly fixed charge revenue from all customers with a 5/8" meter for FY 2020 is calculated as follows:

$$\text{fixed charge rate} \times \text{number of accounts} \times 12 \text{ months}$$

$$\$25.57 \times 15,398 \times 12 = \$4.72\text{M}$$

The same calculation is repeated for all meter sizes and then added together to determine the total monthly fixed charge revenue for all customers. For FY 2020, the projected monthly fixed charge revenue is \$6.32M.

Adding together the commodity charge revenue, monthly fixed charge revenue, and the pumping charge revenue yields the total revenue from current rates.

Table 4-5: Revenue from Current Rates

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Monthly Fixed Charge	\$6,323,065	\$6,329,388	\$6,335,717	\$6,342,053	\$6,348,395
Commodity Revenue	\$22,214,492	\$22,236,707	\$22,258,943	\$22,281,202	\$22,303,483
Pumping Revenue	\$739,453	\$740,192	\$740,932	\$741,673	\$742,415
Revenue from Current Rates	\$29,277,009	\$29,306,286	\$29,335,593	\$29,364,928	\$29,394,293

Miscellaneous Revenue

In addition to revenue from rates, the Water Enterprise also receives miscellaneous revenues from different sources such as antennae siting rental revenue, plan check fees, and other operating/non-operating sources. Total miscellaneous revenues for the Study period are shown in **Table 4-6**. Interest income, which is excluded from **Table 4-6**, is calculated based on projected reserves balances for the water fund and incorporated subsequently into the financial plan. Miscellaneous revenue sources are projected to increase by 3% each year over the Study period.

Table 4-6: Projected Miscellaneous Revenue

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Fund 611					
Stand-By (Fire Detectors)	\$55,300	\$56,500	\$58,195	\$59,941	\$61,739
Backflow Prevention	\$34,800	\$35,500	\$36,565	\$37,662	\$38,792
Installation - Meter	\$21,700	\$21,700	\$22,351	\$23,022	\$23,712
Rental of City Facilities	\$31,900	\$32,500	\$33,475	\$34,479	\$35,514
Miscellaneous Revenue	\$430,900	\$439,300	\$452,479	\$466,053	\$480,035
Fund 612					
Plant Investment Fees	\$350,000	\$350,000	\$360,500	\$371,315	\$382,454
Fire Flow Surcharge	\$25,000	\$25,000	\$25,750	\$26,523	\$27,318
Total Miscellaneous Revenue	\$949,600	\$960,500	\$989,315	\$1,018,994	\$1,049,564

4.2. O&M Expenses

Water Supply Costs

The cost of imported water from Calleguas is the Water Enterprise’s largest O&M expense. One of the advantages of relying primarily on an imported water source is that O&M costs are significantly reduced during periods of lower sales, because less water is being purchased from the wholesaler (Calleguas). **Table 4-7** summarizes the City’s water supply costs during the Study period. Note, the rates remain consistent beyond FY 2021 as the City has chosen to authorize automatic pass-through adjustments to the water purchase costs.

As Calleguas approves increases to its charges, the City will pass-through these costs to customers and adjust the proposed rates accordingly to recover the incremental cost incurred. This mitigates the risk of unknown rate increases by Calleguas as the City’s sole water supplier. Automatic Pass-Through adjustments in the rates are allowed through the provisions of Government Code Section 53756. While the rates remain fixed below, the total water supply cost increases each fiscal year as usage grows. The imported water supply costs account for a water loss factor of 3.8%. The City anticipates that all purchases over the Study period will remain within its Tier 1 Calleguas allotment. Therefore, the Tier 2 Calleguas rate is omitted from this table.

Table 4-7: Projected Fiscal Year Water Supply Costs³

Line	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Total AF Sold	10,047	10,057	10,067	10,077	10,087
2	Water Loss Percentage	3.8%	3.8%	3.8%	3.8%	3.8%
3	Total AF Purchased from Calleguas	10,444	10,454	10,465	10,475	10,486
4						
5	Fixed Charges					
6	Calleguas CRC Charge	\$695,893	\$683,698	\$683,698	\$683,698	\$683,698
7	Calleguas RTS Charge	\$710,121	\$701,302	\$701,302	\$701,302	\$701,302
8	Total Fixed Charges	\$1,406,014	\$1,385,000	\$1,385,000	\$1,385,000	\$1,385,000
9						
10	Variable Charges					
11	Tier 1 Calleguas per AF (Jul to Dec)	\$1,423	\$1,472	\$1,472	\$1,472	\$1,472
12	AF Purchased (Jul to Dec)	5,222	5,227	5,232	5,238	5,243
13	Variable Charges (Jul to Dec)	\$7,430,698	\$7,694,256	\$7,701,950	\$7,709,652	\$7,717,362
14						
15	Tier 1 Calleguas per AF (Jan to Jun)	\$1,472	\$1,472	\$1,472	\$1,472	\$1,472
16	AF Purchased (Jan to June)	5,222	5,227	5,232	5,238	5,243
17	Variable Charges (Jan to Jun)	\$7,686,569	\$7,694,256	\$7,701,950	\$7,709,652	\$7,717,362
18						
19	Total AF Purchased (from Calleguas)	10,444	10,454	10,465	10,475	10,486
20						
21	Variable Water Costs	\$15,117,268	\$15,388,512	\$15,403,900	\$15,419,304	\$15,434,723
22						
23	Total Water Supply Costs	\$16,523,282	\$16,773,512	\$16,788,900	\$16,804,304	\$16,819,723

³ Calleguas Fixed and Variable charges (Lines 6, 7, 11, and 15) are shown without increases beyond FY 2021 because the City anticipates using the AB 3030 pass-through provision.

The above rates charges and water purchases are shown on a fiscal year of July 1 – June 30, while Calleguas operates on a calendar year. Thus, it is estimated that the City will purchase 50% of its fiscal year water demand in one calendar year (for July through December), and the remaining demand in in the following calendar year (January through June). For example, 50% of FY 2020 water is projected to be charged at the CY 2019 rate, with the second half charged the CY 2020 rate. First, Raftelis converted the fixed costs to fiscal year per the equation below. Note that, due to the pass-through provision, the CY 2020 costs will not be increased across the Study period, as the City will pass any fixed charge increases from Calleguas directly to the City’s customers. The calculation is shown below using FY 2020.

$$(CY\ 2019\ Fixed\ Charges * 50\%) + (CY\ 2020\ Fixed\ Charges * 50\%) = FY\ 2020\ Fixed\ Charges$$

$$\$1,427,028 * 50\% + \$1,385,000 * 50\% = \$1,406,014$$

Next, Raftelis calculated the fiscal year variable charges. Note that, while the CY 2020 rate is not increased over the study period due to pass-through, the total variable water costs increase due to demand growth from new accounts. The calculation for FY 2020 is shown below:

$$CY\ 2019\ Tier\ 1\ Rate * (Jul - Dec\ Demand) + CY\ 2020\ Tier\ 1\ Rate * (Jan - Jun * Demand) = Tier\ 1\ Charges$$

$$\$1,423 * (50\% * 10,444AF) + \$1,472 * (50\% * 10,444AF) = \$15,117,268$$

Combining the fixed and variable costs calculated above results in FY 2020 water supply costs totaling \$16,523,282.

Water Operating Expenses

Table 4-8 summarizes budgeted and projected O&M expenses for the Water Enterprise during the Study period. The water supply costs were determined previously in **Table 4-7**. All other costs are based on based on the Water Enterprise’s FY 2020 and FY 2021 adopted budget amounts and escalated beyond FY 2021 based on inflationary assumptions outlined previously in **Table 3-1**.

Table 4-8: Projected O&M Costs

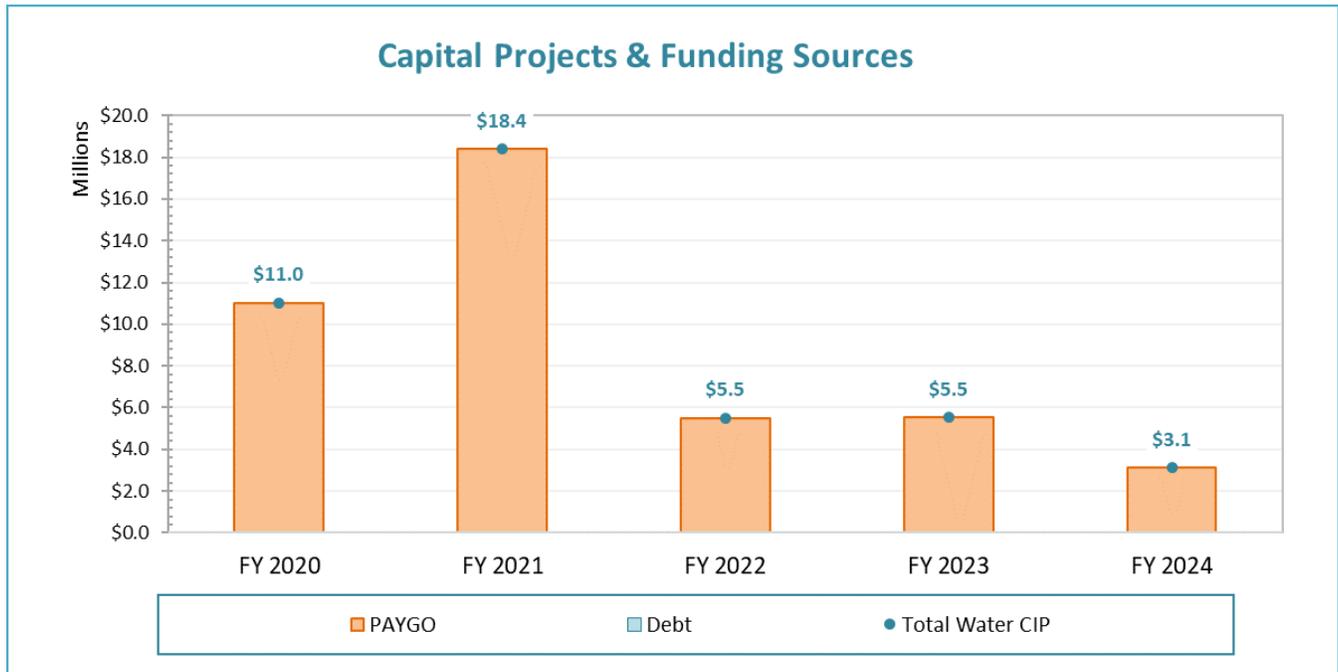
Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Salaries	\$3,129,470	\$3,210,544	\$3,298,834	\$3,389,552	\$3,482,765
Fringe Benefits	\$1,702,105	\$1,807,215	\$1,879,504	\$1,954,684	\$2,032,871
Water Supply Costs	\$16,523,282	\$16,773,512	\$16,788,900	\$16,804,304	\$16,819,723
Other O&M	\$3,382,757	\$3,383,120	\$3,450,344	\$3,518,910	\$3,588,842
Total O&M Expenses	\$24,737,614	\$25,174,391	\$25,417,582	\$25,667,449	\$25,924,201

4.3. Capital Improvement Plan (CIP)

The City provided Raftelis with a five-year capital improvement plan (CIP) schedule through FY 2024 to address the Water Enterprise’s capital needs (**Figure 4-1**). The capital expenses shown below include a capital escalation factor of 1.5% and therefore may not align with the City’s adopted budget. Average annual CIP expenditures over the Study period equal approximately \$8.7M. The CIP expenditures shown below include both repair and

replacement of existing capital assets as well as new capital projects. Substantially higher CIP expenditures in FY 2021 are largely due to over \$16M in capital costs associated with the Thousand Oaks Groundwater Utilization Project. See **Appendix A** for a detailed listing of anticipated CIP project costs over the Study period. The proposed capital improvement plan will be funded entirely through rate and reserves revenues (Pay As You Go or PAYGO). The Water Enterprise currently has no outstanding debt and the City does not plan to issue any new debt in the next five years.

Figure 4-1: Capital Improvement Plan Funding



4.4. Status Quo Financial Plan

Table 4-9 displays the pro forma of the City’s Water Enterprise under current rates over the Study period. All projections shown in the table are based upon the City’s current rate structure and do not yet include any rate adjustments or pass-through increases on wholesale water costs. The pro-forma incorporates the data shown in **Table 4-5** for revenues from current rates, **Table 4-6** for miscellaneous revenues, **Table 4-7** for water supply costs, **Table 4-8** for O&M expenses, and **Figure 4-1** for CIP. Note that interest is also calculated on the fund balance and included as additional revenue.

Table 4-9: Status Quo Financial Plan Pro-Forma

Line	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	REVENUES					
2	Revenues from Rates	\$29,277,009	\$29,306,286	\$29,335,593	\$29,364,928	\$29,394,293
3	Revenue Adjustments	\$0	\$0	\$0	\$0	\$0
4	Interest Income	\$682,215	\$604,742	\$405,502	\$395,727	\$384,101
5	Other Revenues	\$949,600	\$960,500	\$989,315	\$1,018,994	\$1,049,564
6	TOTAL REVENUES	\$30,908,825	\$30,871,528	\$30,730,409	\$30,779,649	\$30,827,959
7						
8	O&M EXPENSES					
9	Water Supply Costs	\$16,523,282	\$16,773,512	\$16,788,900	\$16,804,304	\$16,819,723
10	Other O&M	\$8,214,332	\$8,400,879	\$8,628,682	\$8,863,145	\$9,104,478
11	TOTAL O&M EXPENSES	\$24,737,614	\$25,174,391	\$25,417,582	\$25,667,449	\$25,924,201
12						
13	NET REVENUES	\$6,171,211	\$5,697,138	\$5,312,827	\$5,112,200	\$4,903,758
14						
15	CIP EXPENSES	\$11,020,000	\$18,386,725	\$5,510,500	\$5,538,500	\$3,127,000
16						
17	<i>CIP Projects Funded by</i>					
18	PAYGO	\$11,020,000	\$18,386,725	\$5,510,500	\$5,538,500	\$3,127,000
19	Debt	\$0	\$0	\$0	\$0	\$0
20						
21	NET CASH FLOW	-\$4,848,789	-\$12,689,587	-\$197,673	-\$426,300	\$1,776,758
22						
23	BEGINNING BALANCES	\$45,481,025	\$40,000,021	\$26,756,441	\$26,204,778	\$25,435,035
24	ENDING BALANCES	\$40,632,236	\$27,310,433	\$26,558,768	\$25,778,478	\$27,211,793
25	<i>Target Balance</i>	<i>\$27,904,878</i>	<i>\$28,078,383</i>	<i>\$28,204,456</i>	<i>\$28,333,177</i>	<i>\$28,464,614</i>

Under the ‘status-quo’ scenario, revenues generated from rates and other miscellaneous revenues are adequate to sufficiently recover the operating expenses, but fail to result in ending balances (Line 24) that meet or exceed the total reserve target (Line 25) in FY 2021 through FY 2024. The drawdown in reserves is largely due to the substantial PAYGO-funded CIP expenditures in FY 2020 and FY 2021.

4.5. Recommendations and Proposed Revenue Adjustments

To ensure that the Water Enterprise will have adequate revenues to fund operating expense and capital expenses without drawing down reserves too substantially, Raftelis recommends that the City adjust revenues by 1% per year. This increase assumes future water supply cost increases will automatically be passed through under AB 3030 as described above. The revenue adjustments are scheduled to be implemented on February 13, 2020 and then January 1 of each subsequent fiscal year and shown in **Table 4-10**. Note that the City adjustment of 1% per year shown in **Table 4-10** is to be applied as a uniform percentage increase each year to both monthly fixed charges, commodity rates and pumping charges.

Commodity rates only are also subject to an additional revenue adjustment due to incremental increases in Calleguas water purchase costs resulting from Calleguas wholesale rate increases. The City will pass through these costs directly to customers by charging a uniform pass-through adjustment per hcf of water delivered. The actual percentage increase to the commodity rates resulting from the uniform pass-through adjustment varies by customer class and tier. The Calleguas revenue adjustments in **Table 4-10** therefore reflects the average increase to commodity rates resulting from pass-through adjustments.

Table 4-10: Proposed Revenue Adjustments⁴

Effective Date	City of Thousand Oaks Proposed Water Revenue Adjustments	Calleguas MWD Proposed Water Revenue Adjustments
February 2020	1.0 percent	2.1 percent
January 2021	1.0 percent	2.9 percent
January 2022	1.0 percent	2.6 percent
January 2023	1.0 percent	2.7 percent
January 2024	1.0 percent	2.7 percent

Proposed Financial Plan

A pro forma of the proposed financial plan is shown in **Table 4-11** below. Note that negative cash flow in FY 2020 and FY 2021 (Line 21) is due to substantial PAYGO-funded CIP expenditures in those years. Projected ending balances (Line 24) drop below the target level (Line 25) in FY 2021 through FY 2023 before recovering to the target level at the end of the Study period in FY 2024. Fluctuation in reserve levels is due to the City utilizing its built up CIP reserve in years of significant CIP expenditures (FY 2020 and FY 2021) and then building back up its CIP reserve in years with lower anticipated CIP expenditures (FY 2022 to FY 2024). Taking advantage of the CIP reserve in this manner provides the City with flexibility in its execution of CIP while minimizing the potential need for future debt issuances to finance the Water Enterprise’s CIP. Note that the 1% proposed revenue adjustments in each year (from **Table 4-10 above**) are necessary to meet the total reserve target level by the end of the Study period in FY 2024.

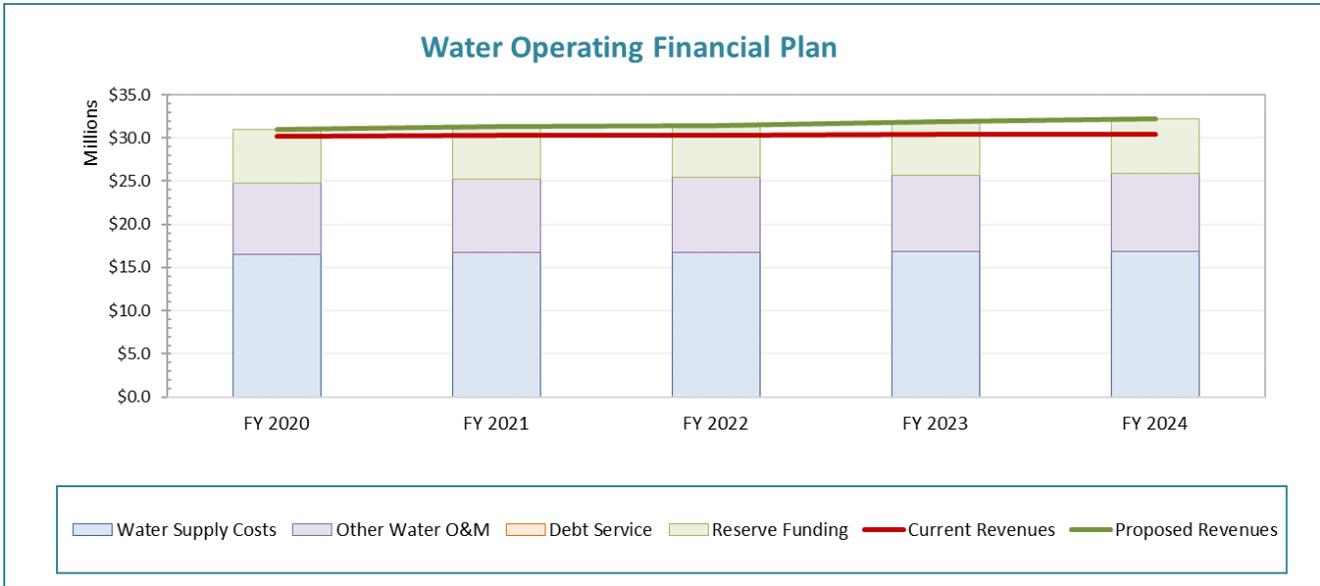
⁴ Note that actual impacts to ratepayers is not equal to the summation of the City’s and Calleguas’ adjustments. Actual customer impacts are detailed in the following section.

Table 4-11: Proposed Financial Plan Pro-Forma

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	REVENUES					
2	Revenues from Rates	\$29,277,009	\$29,306,286	\$29,335,593	\$29,364,928	\$29,394,293
3	Revenue Adjustments	\$121,988	\$441,060	\$739,272	\$1,041,060	\$1,346,465
4	Interest Income	\$682,215	\$606,572	\$413,961	\$415,325	\$419,399
5	Other Revenues	\$949,600	\$960,500	\$989,315	\$1,018,994	\$1,049,564
6	TOTAL REVENUES	\$31,030,812	\$31,314,418	\$31,478,140	\$31,840,308	\$32,209,722
7						
8	O&M EXPENSES					
9	Water Supply Costs	\$16,523,282	\$16,773,512	\$16,788,900	\$16,804,304	\$16,819,723
10	Other O&M	\$8,214,332	\$8,400,879	\$8,628,682	\$8,863,145	\$9,104,478
11	TOTAL O&M EXPENSES	\$24,737,614	\$25,174,391	\$25,417,582	\$25,667,449	\$25,924,201
12						
13	NET REVENUES	\$6,293,199	\$6,140,027	\$6,060,558	\$6,172,858	\$6,285,520
14						
15	CIP EXPENSES	\$11,020,000	\$18,386,725	\$5,510,500	\$5,538,500	\$3,127,000
16						
17	<i>CIP Projects Funded by</i>					
18	PAYGO	\$11,020,000	\$18,386,725	\$5,510,500	\$5,538,500	\$3,127,000
19	Debt	\$0	\$0	\$0	\$0	\$0
20						
21	NET CASH FLOW	-\$4,726,801	-\$12,246,698	\$550,058	\$634,358	\$3,158,520
22						
23	BEGINNING BALANCES	\$45,481,025	\$40,122,008	\$27,319,488	\$27,507,097	\$27,778,414
24	ENDING BALANCES	\$40,754,224	\$27,875,310	\$27,869,546	\$28,141,455	\$30,936,935
25	<i>Target Balance</i>	\$27,904,878	\$28,078,383	\$28,204,456	\$28,333,177	\$28,464,614

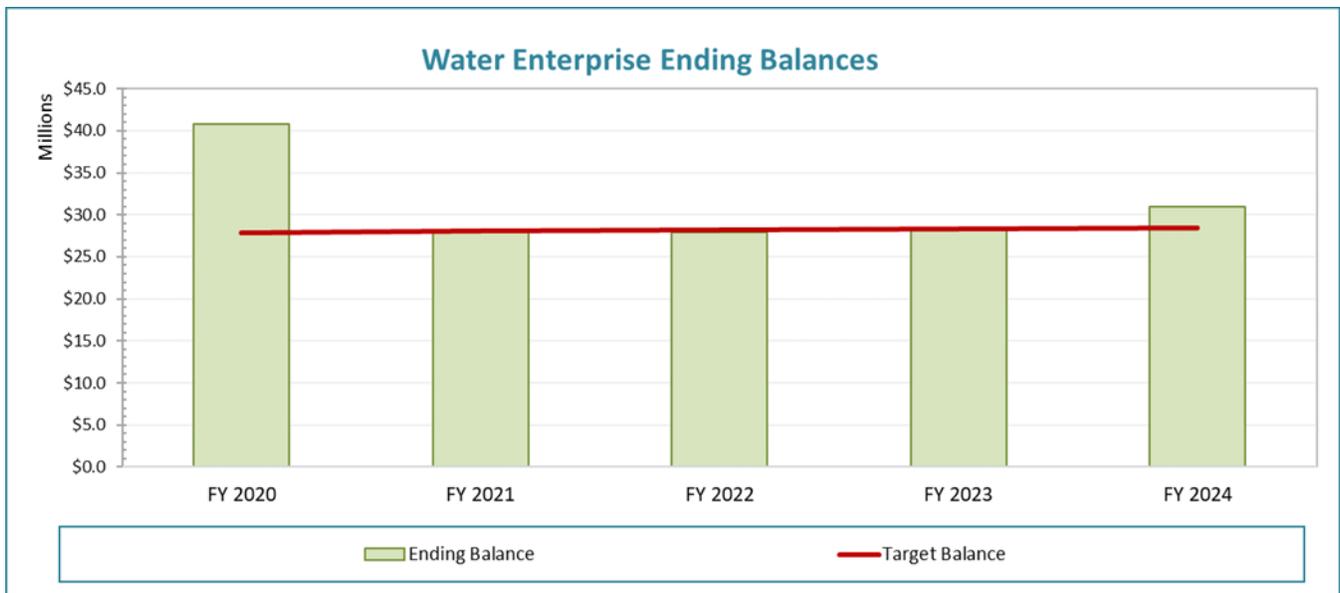
Figure 4-2 illustrates the operating position of the Water Enterprise. Expenses and reserve funding are shown by stacked bars, while total revenues at current rates and proposed rates are shown by red and green lines, respectively. The proposed revenue adjustments result in a modest increase in projected revenues, but are nonetheless necessary to ensure that the Water Enterprise meets its total reserve target by the end of the Study period.

Figure 4-2: Proposed Operating Financial Plan



The ending fund balance for the Water Enterprise is projected and shown in **Figure 4-3**, where the red line indicates the target reserve balance as recommended by the reserve policy discussed in **Section 3**. Under the proposed financial plan, the ending fund balance drops marginally below the target level in FY 2021 through FY 2022 before recovering to the target level in FY 2024. As noted previously, the reduction in reserve levels over the Study period is largely due to substantial PAYGO-funded CIP expenditures in FY 2020 and FY 2021.

Figure 4-3: Water Enterprise Ending Balances



5. Proposed Rates

5.1. Proposed Monthly Fixed Charges for Study Period

Applying the proposed revenue adjustments from **Table 4-10** to the current monthly fixed charges yields the proposed monthly fixed charges for the Study period in **Table 5-1**. Note that while the proposed financial plan includes revenue adjustments for FY 2020 through FY 2024, the City will only be considering adoption of rates for the next two years. Therefore, proposed rates are only provided for FY 2020 and FY 2021.

Table 5-1: Proposed Monthly Fixed Charges for FY 2020 and FY 2021

Monthly Fixed Charges	Current FY 2019	Proposed FY 2020 (Effective 2/13/2020)	Proposed FY 2021 (Effective 1/1/2021)
Meter Size			
5/8"	\$25.57	\$25.83	\$26.09
1"	\$40.36	\$40.77	\$41.18
1 1/2"	\$77.32	\$78.10	\$78.89
2"	\$121.69	\$122.91	\$124.14
3"	\$262.16	\$264.79	\$267.44
4"	\$469.17	\$473.87	\$478.61
6"	\$964.52	\$974.17	\$983.92

5.2. Commodity Rate Structure

The City revised its tiered rate structure during the previous cost of service study adopted in 2016. No modifications to the rate structure have been made since 2016. **Table 5-2** below summarizes the current rate structure. SFR customers are subject to a three-tiered inclining commodity rate structure, while all other customers are subject to uniform commodity rates.

Table 5-2: Commodity Rate Structure

Customer Class	Tier Range (hcf)	Tier Width (hcf)
Single Family Residential		
Tier 1	0 - 12	12
Tier 2	13 - 30	18
Tier 3	31+	∞
MFR	<i>uniform</i>	∞
Commercial	<i>uniform</i>	∞
Irrigation	<i>uniform</i>	∞

5.3. Proposed Commodity Charges for Study Period

The proposed commodity rate increases, which incorporate both the City adjustment and an estimated pass-through adjustment, are shown in **Table 5-3** below. Much like the monthly fixed charges, the commodity charges are increased per the proposed revenue adjustments found in **Table 4-10**. Note that pass-through revenues are only

collected on the volumetric component. The pass-through amount is uniformly applied to each hcf sold. Since each unit (hcf) of water is sold at different prices depending on customer class and tier, the percentage adjustment due to the pass-through adjustment varies. Note that all rates are rounded up to the nearest cent. Therefore, some totals shown in **Table 5-3** may exceed the sum of the constituent parts by one cent.

Table 5-3: Proposed Commodity Rates for FY 2020 and FY 2021

Single Family Residential Commodity Rates	FY 2020 Rate Adjustment		FY 2021 Rate Adjustment	
	(\$)	(%)	(\$)	(%)
Tier 1 (0-12 hcf)				
Existing Rate	\$4.87		\$4.92	
City Adjustment	\$0.05	1.0%	\$0.05	1.0%
	\$4.92		\$4.97	
Pass-through Adjustment	\$0.11	2.3%	\$0.27	3.3%
Total Tier 1 Rate	\$5.03	3.3%	\$5.24	4.3%
Tier 2 (13-30 hcf)				
Existing Rate	\$5.19		\$5.25	
City Adjustment	\$0.05	1.0%	\$0.05	1.0%
	\$5.25		\$5.31	
Pass-through Adjustment	\$0.11	2.1%	\$0.27	3.0%
Total Tier 2 Rate	\$5.36	3.1%	\$5.58	4.0%
Tier 3 (31+ hcf)				
Existing Rate	\$5.61		\$5.67	
City Adjustment	\$0.06	1.0%	\$0.06	1.0%
	\$5.67		\$5.73	
Pass-through Adjustment	\$0.11	2.0%	\$0.27	2.8%
Total Tier 3 Rate	\$5.78	3.0%	\$6.00	3.8%
Non-Residential & MFR Commodity Rates	FY 2020 Rate Adjustment		FY 2021 Rate Adjustment	
	(\$)	(%)	(\$)	(%)
Existing Rate	\$5.21		\$5.27	
City Adjustment	\$0.05	1.0%	\$0.05	1.0%
	\$5.27		\$5.33	
Pass-through Adjustment	\$0.11	2.1%	\$0.27	3.0%
Total Non-Residential & MFR Rate	\$5.38	3.1%	\$5.60	4.0%
Pumping Charge	FY 2020 Rate Adjustment		FY 2021 Rate Adjustment	
	(\$)	(%)	(\$)	(%)
Uniform	\$0.21	1%	\$0.22	1%

5.4. Bill Impacts

Estimated bill impacts for low use (8 hcf), average use (13 hcf) and high use (50 hcf) SFR water customers with a 5/8-inch meter are shown below both in Figure 5-1 and Table 5-4. Note that a SFR customer using 8 hcf per month will experience a 2.4% increase in their monthly water bill, inclusive of all City and pass-through adjustments.

Figure 5-1: Single Family Residential Customer Bill Impacts⁵

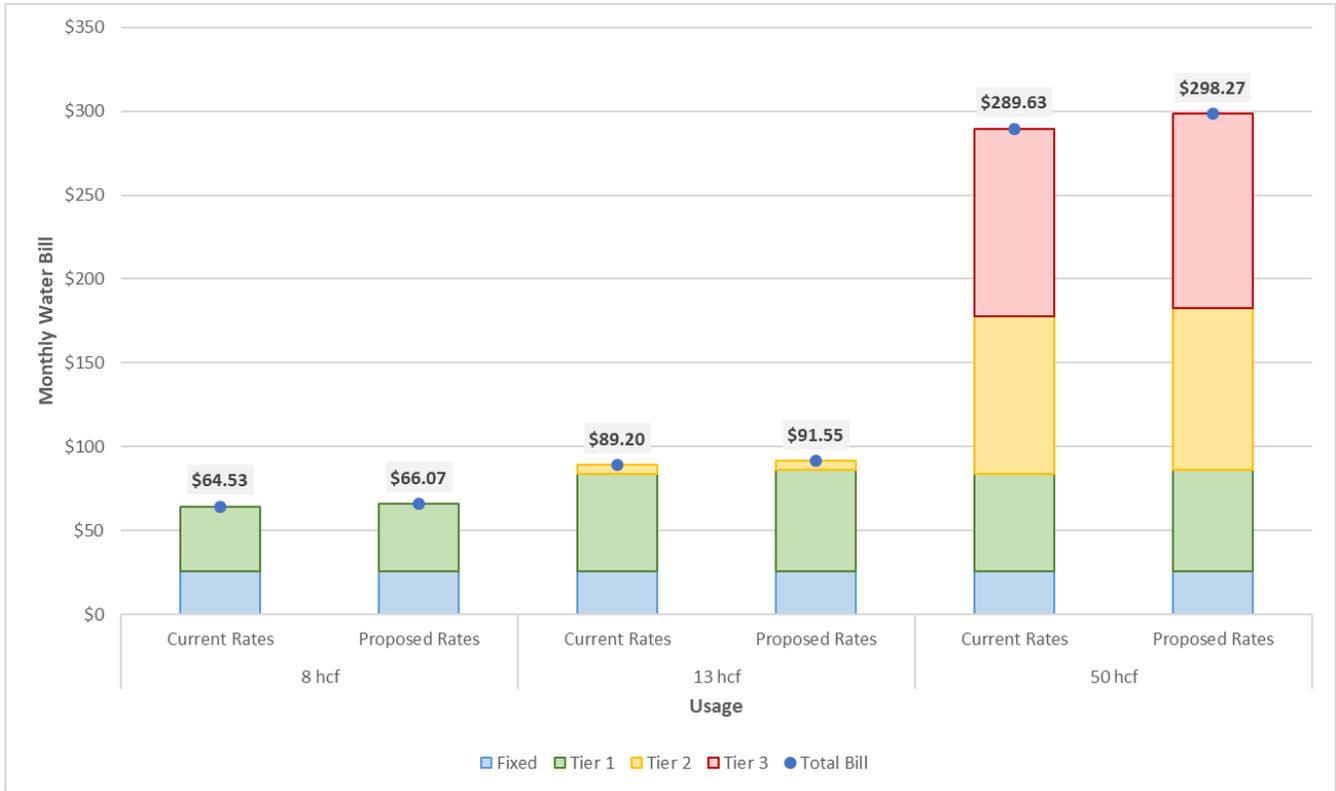


Table 5-4: Single Family Residential Customer Bill Impacts

Monthly Usage	Description	Fixed	Tier 1	Tier 2	Tier 3	Total Bill	Percent Change
8 hcf	Current Rates	\$25.57	\$38.96	\$0.00	\$0.00	\$64.53	
	Proposed Rates	\$25.83	\$40.24	\$0.00	\$0.00	\$66.07	2.4%
13 hcf	Current Rates	\$25.57	\$58.44	\$5.19	\$0.00	\$89.20	
	Proposed Rates	\$25.83	\$60.36	\$5.36	\$0.00	\$91.55	2.6%
50 hcf	Current Rates	\$25.57	\$58.44	\$93.42	\$112.20	\$289.63	
	Proposed Rates	\$25.83	\$60.36	\$96.48	\$115.60	\$298.27	3.0%

⁵ Includes both City and pass-through adjustments.

APPENDICES

APPENDIX A: DETAILED FIVE-YEAR CIP

Line	Water Enterprise CIP Projects	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Automated Meter Reading Program	\$600,000	\$609,000	\$618,000	\$522,500	\$318,000
2	Freeway Reservoir Access Road Improvements	\$0	\$0	\$257,500	\$0	\$0
3	Supervisory Control and Data Acquisition Master Plan and Programmable Logic Controllers	\$1,200,000	\$0	\$0	\$0	\$0
4	Wilder Reservoir Rehabilitation	\$0	\$0	\$2,008,500	\$0	\$0
5	Waterline Looping Installation FY 2019-21	\$0	\$406,000	\$0	\$0	\$0
6	Meadows Reservoir Altitude Valve	\$225,000	\$0	\$0	\$0	\$0
7	Pump Replacement/Upgrade	\$250,000	\$253,750	\$257,500	\$0	\$0
8	Thousand Oaks Groundwater Utilization Project	\$1,850,000	\$14,159,250	\$0	\$0	\$0
9	Grissom 1 and 2 Reservoir	\$0	\$0	\$0	\$0	\$1,060,000
10	Freeway Reservoir Rehabilitation	\$0	\$0	\$0	\$1,358,500	\$0
11	Emergency Water Interconnects FY 2019-21	\$200,000	\$203,000	\$0	\$0	\$0
12	Lone Oak Emergency Generator	\$400,000	\$0	\$0	\$0	\$0
13	Conejo Valley Groundwater Development Implementation	\$0	\$0	\$206,000	\$2,090,000	\$0
14	Pressure Reducing Stations	\$395,000	\$274,050	\$0	\$0	\$0
15	Water Security Cameras at City Reservoirs	\$75,000	\$76,125	\$0	\$0	\$0
16	Water Master Plan Implementation Projects FY 2019-21	\$100,000	\$304,500	\$0	\$0	\$0
17	Calleguas Turnouts Pipeline Upgrades I	\$0	\$0	\$463,500	\$0	\$0
18	Calleguas Turnouts Pipeline Upgrades II	\$0	\$0	\$0	\$470,250	\$0
19	Calleguas Turnouts Regulating Valve Upgrades	\$0	\$507,500	\$0	\$0	\$0
20	Water System Miscellaneous Improvements FY 2019-21	\$200,000	\$203,000	\$0	\$0	\$0
21	Hydrant Replacement FY 2019-21	\$300,000	\$304,500	\$0	\$0	\$0
22	Valve Replacement FY 2019-21	\$600,000	\$609,000	\$0	\$0	\$0
23	Emergency Water Interconnects FY 2021-24	\$0	\$0	\$206,000	\$209,000	\$212,000
24	Polybutylene Service Replacement FY 2019-21	\$600,000	\$0	\$0	\$0	\$0
25	Water Master Plan Implementation Projects FY 2021-24	\$0	\$0	\$206,000	\$209,000	\$212,000
26	Site Improvements at Reservoirs and Pump Stations FY 2019-21	\$400,000	\$406,000	\$0	\$0	\$0
27	Polybutylene Service Replacement FY 2021-24	\$0	\$0	\$618,000	\$0	\$636,000
28	Automated Water Quality Control System/Chemical Dosing	\$1,000,000	\$0	\$0	\$0	\$0
29	Hydrant Replacement FY 2021-24	\$0	\$0	\$51,500	\$52,250	\$53,000
30	Valve Replacement FY 2021-24	\$0	\$0	\$618,000	\$627,000	\$636,000
31	Erbes Road Pump Station Improvements	\$750,000	\$0	\$0	\$0	\$0
32	La Granada Pump Station	\$1,650,000	\$0	\$0	\$0	\$0
33	Conejo Valley Groundwater Management Plan	\$125,000	\$0	\$0	\$0	\$0
34	Urban Water Management Plan	\$0	\$71,050	\$0	\$0	\$0
35	Emergency Water System Update	\$100,000	\$0	\$0	\$0	\$0
36	TOTAL	\$11,020,000	\$18,386,725	\$5,510,500	\$5,538,500	\$3,127,000

APPENDIX B: REVISED 2019 PASS-THROUGH ADJUSTMENT

MEMORANDUM

To: Jay T. Spurgin, Director of Public Works
From: Sanjay Gaur, Project Manager
Date: October 18, 2018
Re: Update of 2019 Water Supply Pass-Through Adjustment

Introduction

Raftelis Financial Consultants, Inc. (Raftelis) was engaged by the City of Thousand Oaks (City) in 2018 to update the City's water supply pass-through adjustment for calendar year (CY) 2019. The City purchases its water supply from Calleguas Municipal Water District (CMWD) and passes through any increase in CMWD water supply charges to its customers via a water supply pass-through adjustment. Automatic pass-through adjustments in water rates are allowed through the provisions of Government Code Section 53756 provided that the adjustments are noticed to ratepayers at least 30 days before the effective date. The City's water commodity rates include a uniform pass-through adjustment that does not vary by customer class or tier and is assessed per hundred cubic feet (hcf) of water delivered.

A proposed pass-through adjustment for CY 2019 was determined in the 2018 Water Enterprise Financial Plan Update Study conducted by Raftelis. However, the City may determine pass-through adjustments annually as updated information regarding actual and projected CMWD water supply charges becomes available. As proposed and estimated CMWD water supply charges in CY 2019 increased less than what was projected in the previous study cited above, the City requested that Raftelis determine an updated CY 2019 pass-through adjustment based on newly available water supply cost information.

Water Supply Costs

The City's pass-through adjustment is determined based on incremental increases in three primary water supply charges assessed by CMWD and the Metropolitan Water District of Southern California (MWD), which supplies water to CMWD. The charges include:

1. **Combined MWD & CMWD Capacity (CRC) Charge:** This includes capacity charges assessed by both CMWD and MWD based on peak demand.
2. **MWD Readiness to Serve (RTS) Charge:** This is a fixed charge assessed by MWD to recover a portion of capital costs.
3. **Combined MWD & CMWD Tier 1 Rate:** This is the effective commodity rate paid by the City for each acre-foot (AF) purchased from CMWD.

The pass-through adjustment for CY 2019 is based on the incremental increases in the three water supply charges outlined above relative to CY 2017. Table 1 below shows each charge's total amount based on CY 2017 rates, CY 2019 rate projections from the previous study, and CY 2019 rates based on updated information (to be used in the updated calculation).

The amounts shown in the table below for the CRC and RTS Charges represent total annual charges. The total annual Tier 1 charge (Table 1, Line 7) however is determined by multiplying the Tier 1 \$/AF rate (Table 1, Line 5) by total projected water purchases in AF in CY 2019 (Table 1, Line 6). Total projected water demand in the City in CY 2019 equals 9,826 AF. Assuming that 3.8% of purchased water is lost due to leakage, the City must therefore purchase 10,214 AF of water from CMWD in CY 2019 to provide 9,826 AF to customers. The demand and water loss projections provided above are consistent with the previous study. Note that CY 2019 water purchases are used to calculate Annual Tier 1 Charges for CY 2017, as the pass-through adjustment is designed only to recover incremental variable water supply cost increases resulting from increased \$/AF rates. Any increase in variable water supply costs due to increases in AF purchased will be recovered by concurrent increases in water sales to the City's customers.

Table 1

Line	Purchased Water Costs	Actual CY 2017	Projections from Previous Study CY 2019	Updated Estimates/ Proposed Rates CY 2019
1	Annual Fixed Charges			
2	CRC Charges	\$749,682	\$824,164	\$672,442
3	RTS Charges	\$785,584	\$863,633	\$718,940
4	Variable Charges			
5	Tier 1 Rate	\$1,300 /AF	\$1,429 /AF	\$1,423 /AF
6	CY 2019 Water Purchases	10,214 AF	10,214 AF	10,214 AF
7	Annual Tier 1 Charges	\$13,277,969	\$14,595,552	\$14,534,269

Calculation of Updated Pass-Through Adjustment

Table 2 below shows the City's projected total annual water supply costs for CY 2019 based on CY 2017 rates (Column B) and updated CY 2019 rates (Column C). All values shown in Table 2 below were determined in the preceding section.

Table 2

Line	Purchased Water Costs	Actual CY 2017	Updated Estimates/ Proposed Rates CY 2019
	[A]	[B]	[C]
1	Annual Charges		
2	CRC Charges	\$749,682	\$672,442
3	RTS Charges	\$785,584	\$718,940
4	Tier 1 Charges	\$13,277,969	\$14,534,269
5	Total Annual Charges	\$14,813,235	\$15,925,651

Total annual charges in Column B of Table 2 effectively represent water supply costs that are recovered by the City's rates and charges before the inclusion of any pass-through adjustment. The pass-through adjustment is simply designed to recover incremental water supply costs resulting from any increase in CMWD fixed charges and rates since CY 2017. Therefore, the updated pass-through adjustment for CY 2019 is calculated by:

- 1) Subtracting total annual charges based on CY 2017 rates (Table 2, Column B, Line 5) from total annual charges based on updated CY 2019 rates (Table 2, Column C, Line 5) to determine the pass-through adjustment revenue requirement for CY 2019.

$$[\$15,925,651 - \$14,813,235 = \$1,112,416]$$

- 2) Dividing the CY 2019 pass-through adjustment revenue requirement from Step 1 by total projected CY 2019 water sales (in AF) to determine the updated \$/AF pass-through adjustment for CY 2019.⁶

$$[\$1,112,416 \div 9,826AF = \$113.12/AF]$$

- 3) Converting the updated CY 2019 pass-through adjustment from \$/AF to \$/hcf.

$$[\$113.12/AF \times \frac{1 AF}{435.6 hcf} = \$0.26/hcf]$$

Table 3 below shows the updated CY 2019 pass-through adjustment in Line 1 and the CY 2019 pass-through adjustment proposed in the 2018 Water Enterprise Financial Plan Update Study in Line 2. The updated pass through adjustment of \$0.26/hcf represents a \$0.09 reduction from the previously proposed adjustment of \$0.35/hcf. Because the City applies pass-through adjustments uniformly to all commodity rates, the results below demonstrate that the City can reduce all CY 2019 commodity rates proposed in the previous study by \$0.09/hcf, and still adequately recover projected water supply costs in CY 2019.

Table 3

Line	Description	Value
1	CY 2019 Adjustment: Updated	\$0.26/hcf
2	CY 2019 Pass-Through Adjustment: From Previous Study	\$0.35/hcf
3	Difference (\$)	(\$0.09)

⁶ The \$/AF pass-through adjustment is rounded up to the nearest cent.